AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A wavelength-tunable laser comprising:

a first resonant cavity containing an optical amplifier medium;

a pair of opposed reflector members which define the first resonant cavity;

a second resonant cavity; and

a reflector external to said first resonant cavity delimiting the second resonant cavity thereinbetween, and selectively reflecting for an integer number N of optical frequencies, wherein said two opposed reflector members are not wavelength selective and delimit an amplifying first active section coupled to a phase tuning second active section, each of said two active sections connected to an electrical supply, said second active section having an effective group index that can be adjusted electro-optically as a function of an electrical voltage applied, said first and second active sections having dimensions such that a difference between optical frequencies of any two resonant modes of said first resonant cavity is never equal to a difference between optical frequencies of any two selectively reflected frequencies of said reflector, and second active section modifying an optical length of said first resonant cavity to provide for a selective coincidence of only one optical frequency between the resonant modes of said first resonant cavity and the selectively reflected frequencies of said reflector, wherein the difference between any two adjacent reflected optical frequencies is constant and the reflected optical frequencies are interleaved with consecutive optical frequencies of resonant modes.

2. (Cancelled)

3. (Currently Amended) The wavelength-tunable laser claimed in claim [[2]] 1 wherein the ratio of the difference between two adjacent optical frequencies of two resonant modes to the difference between two adjacent reflected optical frequencies is equal to N/(N-1).

4. (Original) The wavelength-tunable laser claimed in claim 1 wherein said external reflector is a waveguide including at least one sampled Bragg reflector grating optically coupled to said first cavity.

5. (Original) The wavelength-tunable laser claimed in claim 4 wherein said waveguide

includes a plurality of sampled Bragg reflector gratings and each sample of a first grating, with the possible exception of a first of them or a last of them, is between two consecutive samples of a second grating.

6. (Previously Presented) The wavelength-tunable laser claimed in claim 4 wherein a sampled Bragg grating of said waveguide has a pitch that is not constant.

7. (Currently Amended) The wavelength-tunable laser claimed <u>in claim</u> 1 wherein said first cavity is formed between a first outside face of said first section and an outside face of said second section.

8. (Currently Amended) The wavelength-tunable cavity claimed <u>in claim</u> 1 wherein said first cavity is formed between a first outside face of said first section and an entry face of said reflector.

9. (Currently Amended) The wavelength-tunable laser claimed in <u>claim</u> 1 wherein the variation of the effective group index of said phase tuning second active section is obtained by a Franz Keldysh effect.

10. (Currently Amended) The wavelength-tunable laser claimed in <u>claim</u> 1 wherein the variation of the effective group index of said phase tuning second active section is obtained by a Stark quantum confinement electro-optical effect.

11. (Previously Presented) The wavelength-tunable laser claimed in claim 1 wherein the electrical supply of the second active section modifies the effective group index of said second active section to change the optical length of the first resonant cavity and slip a comb of said resonant modes of said first resonant cavity.

12. (New) A wavelength-tunable laser comprising:

a first resonant cavity containing an optical amplifier medium;

a pair of opposed reflector members which define the first resonant cavity;

a second resonant cavity; and

a reflector external to said first resonant cavity delimiting the second resonant cavity thereinbetween, and selectively reflecting for an integer number N of optical frequencies, wherein said two opposed reflector members are not wavelength selective and delimit an amplifying first active section coupled to a phase tuning second active section, each of said two active sections connected to an electrical supply, said second active section having an effective group index that can be adjusted electro-optically as a function of an electrical voltage applied, said first and second active sections having dimensions such that a difference between optical frequencies of any two resonant modes of said first resonant cavity is never equal to a difference between optical frequencies of any two selectively reflected frequencies of said reflector, and second active section modifying an optical length of said first resonant cavity to provide for a selective coincidence of only one optical frequency between the resonant modes of said first resonant cavity and the selectively reflected frequencies of said reflector, wherein said waveguide includes a plurality of first sampled Bragg reflector gratings corresponding to a first Bragg wavelength and a plurality of second sampled Bragg reflector gratings corresponding to a second Bragg wavelength, wherein each sample of the first and second Bragg gratings, with the possible exception of a first or a last sample of the Bragg gratings, is disposed on the reflector in a repeated pattern comprising one sample of the first Bragg gratings, a first sample of a plurality of third gratings, one sample of the second Bragg gratings, and a second sample of the third gratings.

13. (New) The wavelength-tunable laser claimed in claim 12, wherein each sample of the plurality of second sampled Bragg reflector gratings is disposed half-way between each sample of the first plurality of sampled Bragg reflector gratings.

14. (New) The wavelength-tunable laser claimed in claim 12, wherein the third gratings are Fabry-Perot sections.

15. (New) A method of manufacturing a reflector for a wave-length tunable laser, comprising:

disposing a plurality of sampled first Bragg reflector gratings corresponding to a first

Bragg wavelength on the reflector;

disposing a second plurality of sampled Bragg reflector gratings corresponding to a second Bragg wavelength on the reflector, wherein each sample of the first and second Bragg gratings, with the possible exception of a first or a last sample of the Bragg gratings, is disposed on the reflector in a repeated pattern comprising one sample of the first Bragg gratings, a first sample of a plurality of third gratings, one sample of the second Bragg gratings, and a second sample of the third gratings.

16. (New) The method of claim 15, wherein each sample of the second plurality of sampled Bragg reflector gratings is disposed half-way between each sample of the first plurality of sampled Bragg reflector gratings.

17. (New) The method of claim 15, wherein the third gratings are Fabry-Perot sections.